

## **IRRIGATION SYSTEM, SURFACE AND SUBSURFACE**

### **Design Survey**

The following information shall be obtained and recorded in the field notes:

- a. Topographic surveys (as needed).
- b. Profile and alignment of conveyance.
- c. Elevations and location of water control structures.

### **Design Data**

The following shall be considered minimum in the design of all surface and subsurface irrigation systems. The information shall be recorded in the design notes or in some instances the information may be recorded in the field notes. Appropriate data shall be transferred to the construction drawings.

- a. Type of soil.
- b. Water requirement and irrigation methods for crop involved.
- c. Location and design of measuring devices, devices, division boxes, checks, erosion control structures, and method of conveyance.

### **Drawings and Specifications**

The complexity of the system will dictate the need for drawings and specifications. If drawings are required to depict the requirements for the system, they shall include, but will not be limited to the following:

- a. Plan of system.
- b. Profile and details for the conveyance system.
- c. Structural layout and details.
- d. Table of quantities.
- e. Location map.

Practice specifications along with applicable "Item of Work and Construction Details" shall be provided for each item or phase shown on the construction drawings.

### **Layout Survey Notes**

In some instances the design survey and layout survey map may be accomplished in one operation. Where a layout survey is required, it shall be recorded in the field notes. The survey shall include, but will not be limited to the following:

- a. Refer to the record requirements for the type of conveyance system involved.

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- b. Structure location, alignment and reference stakes.

### **Compliance Checks**

The complexity of the system will dictate the need for compliance checks during construction. All compliance checks shall be recorded in the field notes. Narratives of construction checks shall be recorded in the job diary or on a sheet in the field notes. The final compliance check shall include, but will not be limited to the following:

- a. Refer to record requirements for the specific type of conveyance system involved.
- b. Dimension elevation, and alignment of structures.

### **As-Built Plans**

As-Built drawings shall be prepared for all systems that involve structures, permanently installed pipelines, lined conveyance systems or any other installation that requires a plan to depict the requirements. The As-Built drawings shall reflect all significant changes in linear measurements, quantities, alignment or design changes. If there were no significant changes, the original drawing shall be marked "As-Built".

Where standard plans were used and there was no significant change, an entry shall be made in the field notes indicating the installation was in accordance with the applicable standard plan. In this instance, "As-Built" drawings are not required.